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TACTICS OF GROUND DEPLOYMENT OF FORCES AND RESOURCES USED FOR THE TRAINING OF RESCUE UNITS FOR FIRES OCCURRING IN THE NATURAL ENVIRONMENT

Aviation accidents and incidents in the natural environment belongs to one of the most difficult adverse events from the perspective of firefighting and the saving of human lives. As these undesirable occurrences often occur in inaccessible terrain, they record large numbers of losses on life, property and the environment. This article deals with the practical training of rescue units for undesirable events in the natural environment. The article discusses the focus of practical training, tactics of ground deployment of forces and resources, and the practical benefits of the training.

***Keywords**: air accident / incident, natural environment, training of rescue units, tactics of deploying forces and resources*

INTRODUCTION

An aviation accident or incident may occur at or outside the airport and often in inaccessible areas overgrown with trees, dry grass, and the like. Liquidation of these fires takes place in different ways. The most severe firefighting in a natural environment occurs when such a fire occurs predominantly in a rugged and difficult to reach terrain where the availability of fire-fighting equipment is difficult or totally impossible. In order for the intervention to be as effective as possible and for the fire units to perform these activities in a coordinated manner, such activities must be exercised in advance. For these complex activities, rescue units are also being prepared with regard to the rescue and firefighting equipment. Firefighters are prepared with the help of fire-fighting tactics in the natural environment and with the use of material means and new fire-fighting equipment. An important part of this preparation is also the supply of water to difficult or inaccessible terrain, by methods known to date and by combination thereof. The outcome of such exercises and training is to provide knowledge and correct deployment of forces and resources as well as co-ordination of rescue and fire-fighting units.

PRACTICAL TRAINING OF RESCUE UNITS FOR FIRES OCCURRING IN NATURAL ENVIRONMENT

Practical training performed during rescue exercises is a response to the emerging fires of aircraft in the natural environment and the difficulty in handling them. It is designed for all rescue units to gain and deepen knowledge and practical skills in this area [1].

Practical training is focused on:

- ✈ firefighting aircraft in the natural environment and natural fires, the most commonly used methods using large amounts of technical and material means put into use in the conditions of the Fire and Rescue Service;

- to transport the extinguisher to an inaccessible upper terrain by means of a hose line (serial connection of pumps: pump - pump, pump - tank);
- pointing to the basic need - requiring a greater number of fire extinguishers (shuttle, parallel pump connection);
- the organization and co-operation of members of staff in the interference of a larger scale;
- provision of drinking regimen and diet for rescue units during prolonged interventions [1].

In training, is used differently the most commonly used methods of fighting such fires and transport of water:

- parallel connection of pumps to pumping position;
- serial connection of pumps by pump-tank system;
- serial connection of pumps by pump-pump system;
- a car designed for shuttle traffic in case of greater fire extinguishing consumption;
- pond system, self-propelled fire extinguishing;
- firefighting with GENFO bags;
- extinguish a grassland by means of Fire Beater [1].

Terrain for practical training

The best terrain for training firefighting aircraft in the natural environment is the field terrain, meadows, under the wooded part and in the forested part. This part is choose so that the altitude of the place where the base was at the same time as the pumping position was about 380 m above sea level. There may or may not be a fire tank to pump water. Camber from the pumping position to the last lake under the forest we simulate at the 74 meters (altitude 460 m above sea level) [1][2].

FORCES AND RESOURCES INVOLVED IN TRAINING

All affected rescue units should be involved in the training. The main tasks of the commander in this case include the command of intervention during training, the operation of CAS pumps and the theoretical training of rescue units. As the attempt to bring practical training as close as possible to reality, intervention sections are created and the activities distributed to the commander of practical training [7].

Intervention sections

Filling Position.

1. Intervention section – water transport from CAS 30 T-815/7 to PS 12.
2. Intervention section – stations for fighting of local fires (lakes).

Means used to train firefighting of aircraft in a natural environment

In the case of aircraft fires in natural environments as well as other fires, the amount and quality of technical and material means many times decides on the success of their handling in view of the difficult terrain, weather conditions and the rapid spread of fire. The Fire and Rescue Corps currently has a large number of quality moving and stationary technical means. During the training, is used the means most frequently used for adverse events and extraordinary events in the natural environment [1].

The used means:

1. Technical means:
    - Movable technical means:
        - CAS 30 IVECO TRAKKER,
        - CAS 30 TATRA T-815/7,
        - CAS 30 TATRA T-815.
    - stationary technical means:
        - PS 12,
        - the HONDA pump to the lakes,
        - Floating pump HONDA.
2. Material means:
    - lakes 4 pieces,
    - pressure hoses type B,
    - pressure hoses type C,
    - allocators,
    - overpressure valve,
    - D-type streamers,
    - Combined type C streams.
3. Auxiliary material:
    - Pressure hose sleeves.

Procedure for distribution of forces and means

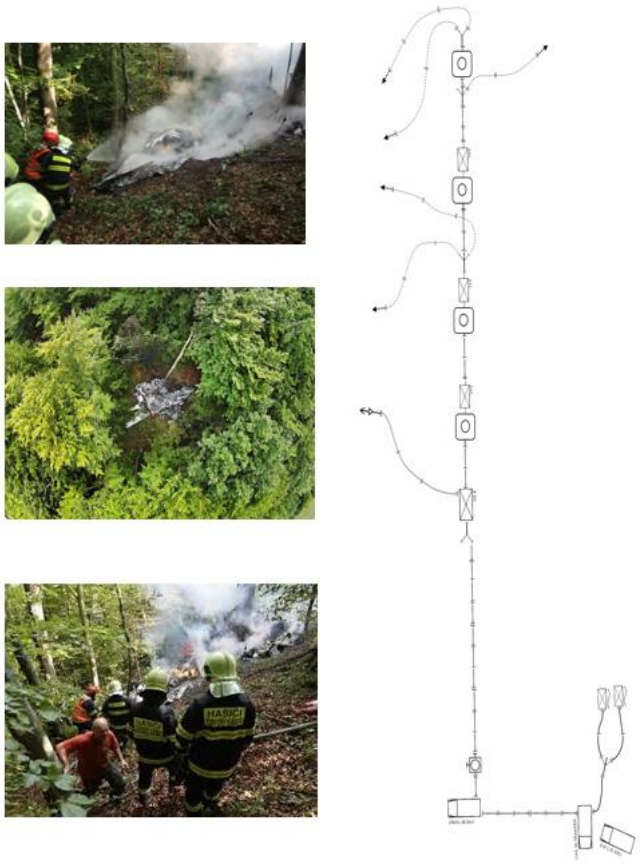

Figure 1. Distribution of forces and resources

Organization of practical training of fire-fighting aircraft in the natural environment:

1. Arrival at the place of intervention - practical training,
2. Explain to rescue units problems of system involvement - exercisers,
3. Layout of the technique at designated locations,
4. Distribution of forces, stationary technical and material means,
5. Connecting the system using pressure hoses (Figure 1),
6. The connection of technical means and the introduction of a hose line connected to the supply of water to lakes and streamlines of types C, D,
7. Extinguishing of improvised fires imitated by smokers,
8. Ending water supply to the system,
9. Dewatering the system to minimize damage caused by the amount of water [3].

EVALUATION OF TRAINING AND BENEFITS FOR PRACTICE

Rescue units will acquire:

- practical skills of using parallel, serial, pendulum and combined water transport over long distances and the possibilities of fighting fire in the natural environment;
- practical skills in working with technical and material means in inaccessible terrain;
- practical knowledge of pressure losses on hose lines, material resources and the need for efficient deployment of fire pumps;
- knowledge in coordination with the participation of several fire brigades and rescue units.

Inclusion of new technologies into training:

- POLARIS quad bike - usage:
  - transferring the fire extinguisher to inaccessible terrain,
  - transfer of stationary technical and material means.
- Six-wheel driver – usage:
  - transport of heavier stationary technical means;
  - simulation of injuries to persons with their transport at the base.

CONCLUSION

Aircraft incidents and fires in the natural environment have been and are the cause of many disasters. As these catastrophic events come suddenly and unexpectedly, there is a great loss of life, property and the environment. In spite of the ever-evolving modern technique with which such a kind of undesirable event can be instantly eliminated, we cannot prevent its devastating effects.

When localization and liquidation of fires, rescue worker can lose orientation due to a smoke, darkness and poor visibility caused by fog and haze, ignorance of the terrain in which it is located, as well as its segmentation. Localization and destruction of fires is very complicated and costly. Rescue teams must take care to be adequately prepared to deal with such incidents. For the preparation of these units, practical training is provided in a natural environment where it is possible to simulate the occurrence of an undesirable event as best as possible. The aim of these training is to provide the best possible preparation of the rescue teams for these undesirable events from the point of view of their coordination, the use of appropriate techniques, procedures and the like.

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ÉLŐ ERŐK ÉS ERŐFORRÁSOK TELEPÍTÉSÉNEK TAKTIKÁJA MENTŐ EGYSÉGEK KÉPZÉSÉNEK CÉLJÁBÓL TERMÉSZETI KÖRNYEZETBEN BEKÖVETKEZETT TŰZESETEK ELHÁRÍTÁSÁRA

A légi közlekedési balesetek és események bekövetkezése a természeti környezetben az egyik legnehezebb feladat a tűzoltás és az emberi élet megmentése szempontjából. Mivel ezek a nemkívánatos események gyakran a megközelíthetetlen terepen következnek be, nagymértékű veszteséget okoznak emberi életben, anyagi javakban és a környezetben. A cikk foglalkozik a mentési egységek gyakorlati képzésével a légiközlekedési eseményeknek a természeti környezetben való bekövetkezésének esetére. A cikk tárgyalja a gyakorlati képzést, az élő erők és az erőforrások telepítésének taktikáját, valamint a képzés gyakorlati hasznát.

***Kulcsszavak**: légiközlekedési baleset, esemény, természeti környezet, mentési egységek képzése, élő erők és erőforrások telepítésének taktikája*

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